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Clifford Chance US LLP

to be determined

Docket No. 3634-025

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Smith et al.

Filed: December 7, 2001

10/008,960

Group Art Unit:

SENESCENT CELL DERIVED INHIBITORS OF DNA SYNTHESIS For:

INFORMATION DISCLOSURE STATEMENT

Examiner:

Commissioner for Patents Washington, D.C. 20231

Sir:

Serial No:

In order to comply with 37 CFR 1. 97 and 1.98, attached hereto is a copy of Form PTO-1449 and copies of the documents listed thereon.

Applicants respectfully request the Examiner's consideration of the cited references and entry into the record of this application and that they be cited of record in the prosecution history of the present application by initialing Form PTO-1449 next to the document. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that there has been full compliance with the guidelines for citation. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

The present Information Disclosure Statement is being submitted in compliance with 37 CFR 1.56, but the citation of such document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR ± 104 and in the course of each search, will review for relevance every document cited on the attached form even if not initialed.

The present Information Disclosure Statement has been submitted prior to the receipt of an Office Action in this application. Accordingly, no fee is due. However, in the event that a first Office Action was mailed on or before the date of submission of this disclosure statement, the Commissioner is hereby authorized to charge any fees to deposit Account No. 50-0521.

Date: 12/17/02

Respectfully submitted,

David F. Ries Reg. No. 43,046

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PTO 1449 INFORMATION DISCLOSURE STATEMENT Applicant: James R. Smith et al. Title: SENESCENT CELL-DERIVED INHIBITORS OF DNA SYNTHESIS U.S. PATENT DOCUMENTS Examiner's Patent Number Date Name Class Sub- Filing

Examiner's Initial	Patent Number	Date	Name	Class	Sub- Class	Filing Date
	4,897,355	1/30/90	Eppstein et al.	435	240.2	10/29/87
	5,190,762	3/2 '93	Yarosh	424	450	1/23/91
	5,296,231	3/22/94	Yarosh	424/44.6	435	12/26/90
	5,077,211	12/31/91	Yarosh	435	193	7/6/88
	4,247,411	1/27/81	Vanlerberghe et al.	252	316	1/31/79
	5,164,488	11/17/92	Vanlerberghe et al.	530	391.1	2/13/91
	5,204,112	4/20/93	Hope et al.	124	450	6/12/87
	5,302,706	4/12/94	Smith	536	23.1	11/2/92
	4,837,380	6/6.′89	Deftos et al.	424	450	3/17/87
	5,424,400	6/13/95	Smith	530	350	1/3/94

FOREIGN PATENT DOCUMENTS Document Number Name Class Sub-Class Translation Date Yes/No WO 92/20796 11/26/92 Beach C12N 15/12 Yes WO 93/06123 4/1/93 Roberts et al. C07H 21/04 Yes WO 91/01719 2/21/91 Weiner A61K 9/127 Yes WO 93/19091 9/30/93 Smith et al. C07K 15/00 Yes WO 93/10242 5/27/93 Beach C12N 15/54 Yes WO 94/09135 4/28/94 C12N 15/12 Yes Beach et al. EP 0 293 249 5/27/88 Smith 15/62 C12N Yes

OTHERS, including Author, Title, Date, Pertinent Pages, etc.
Gennaro, A.R. et al., "Sustained-Release Drug Delivery Systems, "Philadelphia College of Pharmacy and Science", pp. 1691-1693 (1990)

Drescher-Lincoln, C.K. et al., "Inhibition of DNA Synthesis in Proliferating Human Diploid Fibroblasts by Fusion with Senescent Cells," Exp. Cell Res. 144: 455-462 (1983)

Examiner: Date Considered



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INFORMATION DISCLOSURE STATEMENT

Title: SENESCENT CELL-DERIVED INHIBITORS OF DNA SYNTHESIS

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Applicant: James R. Smith et al. Filing Date: Group

December 7, 2001 1647

	OTHERS, including Author, Title, Date, Pertinent Pages, etc.
	Drescher-Lincoln, C.K. <u>et al.</u> , "Inhibition of DNA Synthesis in Senescent-Proliferating Human Cybrids is Mediated by Endogenous Proteins," <u>Exp. Cell Res.</u> <u>153</u> :208-217 (1984)
	Lumpkin, C.K. et al., "Existence of High Abundance Antiproliferative mRNA's in Senescent Human Diploid Fibroblasts," <u>Science</u> 232:393-395 (1986)
	West, M.D. et al., "Replicative Senescence of Human Skin Fibroblasts Correlates with a Loss of Regulation and Overexpression of Collagenase Activity," <u>Exp. Cell Res.</u> 184:138-147 (1989)
	Giordano, T. et al., "Identification of a Highly Abundant cDNA Isolated from Senescent WI-38 Cells," Exp. Cell Res. 185:399-406 (1989)
	Sierra, F. et al., "T-Kininogen Gene Expression Is Induced during Aging," Molec. Cell. Biol. 9:5610-5616 (1989)
	Maier, J.A.M. <u>et al.</u> , "Extension of the Life-Span of Human Endothelial Cells by an Interleukin-la Antisense Oligomer," <u>Science</u> <u>249</u> :1570-1574 (1981)
	Smith, J.R., "A Hypothesis for in vitro Cellular Senescence Based on the Population Dynamics of Human Diploid Fibroblasts and Somatic Cell Hybrids,", In: Monographs in Developmental Biology; Sauer, H. W. (Ed.), S. Karger, New York, N.Y. 17:193-207 (1984)
	Smith, J.R. <u>et al.</u> , "Further Studies on the Genetic and Biochemical Basis of Cellular Senescence," <u>Exper. Gerontol.</u> <u>24</u> :377-381 (198)
	Spiering, A.L. et al., "A Potent DNA Synthesis Inhibitor Expressed by the Immortal Cell Line SUSM-1," Exper. Cell Res. 179:159-167 (1988)
	Pereira-Smith, O.M. et al., "Senescent and Quiescent Cell Inhibitors of DNA Synthesis Membranc-Associated Proteins," Exper. Cell Res. 160:297-306 (1985)
	Kleinsek, D.A., "Selection of mRNAs Expressed During Cellular Senescence <i>In Vitro</i> ." Age 12:55-60 (1989)
	Pereira-Smith, O.M. et al., "Negative Growth Control in Cellular Senescence," <u>J Cell.</u> <u>Biochem</u> (Supply (12 part A)) 193 (1988)
Examiner:	Date Considered



Applicant.

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INFORMATION DISCLOSURE STATEMENT

Title: SENESCENT CELL-DERIVED INHIBITORS OF DNA SYNTHESIS

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Applicant: James R. Smith et al.

Filing Date: Group

December 7, 2001 | 1647

	OTHERS, including Author, Title, Date, Pertinent Pages, etc.
	Kleinsek, D.A. et al., "Isolation of cDNA Sequences Specific to Senescent Human Diploid Fibroblast Cells <i>In Vitro</i> ". Age 10:125 (1987)
	Spiering, A.L. <u>et al.</u> , "Correlation between Complementation Group for Immortality and DNA Synthesis Inhibitors," <u>Exper. Cell Res.</u> <u>195</u> :541-545 (1991)
	Murano, S. <u>et al.</u> , "Diverse Gene Sequences Are Overexpressed in Werner Syndrome Fibroblasts Undergoing Premature Replicative Senescence," <u>Molec. Cell. Biol.</u> <u>11</u> :3905-3914 (August 1991)
	Pereira-Smith, O.M. <u>et al.</u> , "Genetic Analysis of Infinite Division in Human Cells: Identification of Four Complementation Groups," <u>Proc. Natl. Acad. Sci. (U.S.A.)</u> <u>85</u> :6042-6046 (1988))
	Ning, Y. et al., "Genetic Analysis of Indefinite Division in Human Cells: Evidence for a Cell Senescence-Related Gene(s) on Human Chomosome 4," Proc. Natl. Acad. Sci. (U.S.A.) 88:5635-5639 (1991)
	Smith, J.R., "Expression of Antiproliferative Genes in Senescent Cells," <u>J.A.G.S.</u> 35:894 (1987)
	Smith, J.R. <u>et al.</u> , "Negative Growth Control in Cellular Senescence," <u>J. Cell Biochem Suppl.</u> (13 part C) 147 (1989)
	Takebe, Y. et al., "SRa Promoter: An Efficient and Versatile Mammalian cDNA Expression System Composed of the Simian Virus 40 Early Promoter and the R-U5 Segment of Human T-Cell Leukemia Virus Type 1 Long Terminal Repeat," Mol. Cell Biol. 8:466-472 (1988)
	Xiong, H. et al., "D Type Cyclins Associate with Multiple Protein Kinases and the DNA Replication and Repair Factor PCNA," Cell 71:505-514 (1992)
	Sherr, C.J., "Mammalian G1 Cyclins," <u>Cell</u> <u>73</u> :1059-1065 (1993)
Examiner:	Date Considered



PTO 1449

INFORMATION DISCLOSURE STATEMENT

Title: SENESCENT CELL-DERIVED INHIBITORS OF DNA SYNTHESIS

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Atty Docket: 3634-025 | Serial No. 10/008,960

Applicant: James R. Smith et al.

Filing Date: Group

December 7, 2001 1647

	Lew, D.J. et al., "Isolation of Three Novel Human Cyclins by Rescue of G1 Cyclin (Cln) Function in Yeast," Cell 66:1197-1206 (1991)
	Hunter, T. et al., "Cyclins and Cancer," Cell 66:1071-1074 (1991)
	Norbury, C. et al., "Animal Cell Cycles and Their Controls," Ann. Rev. Biochem. 61:441-470 (1992)
	Koff, A. et al., "Human Cyclin E, a New Cyclin That Interacts With Two Members of the CDC2 Gene Family," Cell 66:1217-1228 (1991)
	El-Deiry, W.S. et al., "WAF1, A Potent Mediator of p53 Tumor Suppression," Cell 75:817-825 (1993)
	Harper, J.W. et al., "The p21 Cdk-Interacting Protein Cip1 Is A Potent Inhibitor of G1 Cyclin-Dependent Kinases," Cell 75:805-816 (1993)
	Jiang, H., et al., "Use of a Sensitive and Efficient Substraction Hybridization Protocol for the Identification of Genes Differentially Regulated During the Induction of Differentiation in Human Melanoma Cells," Molec. Cell Differentiation 1(3):285-299 (1993)
	Tenenbaum, L., et al., "The Cell Cycle and Cancer Chemotherapy," In: "Cancer Chemotherapy and Biotherapy A Reference Guide," W.B. Saunders Company, Philadelphia, pp. 3-13 (1994)
	Xiong, Y., et al., "p21 is a Universal Inhibitor of Cyclin Kinases," Nature 366:701-704 (1993)
	Dulic, V., <u>et al.</u> , "p53-Dependent Inhibition of Cyclin-Dependent Kinase Activities in Human Fibroblasts During Radiation-Induced G1 Arrest," <u>Cell</u> 76:1013-1023 (1994)
	Pines, J "p21 Inhibits Cyclin Shock," Nature 369:520-578 (1994)
	Noda, A., et al., "Cloning of Senescent Cell-Derived Inhibitors of DNA Synthesis Using an Expression Screen," Exper. Cell. Res. 211:90-98 (1994)
	Xiong, Y., et al., "Subunit Rearrangement of the Cyclin Dependent Kinases Is Associated with Cellular Transformation." Genes Devel. 7:1572-1583 (1993)
Evaminer:	Date Considered

Examiner:

Date Considered



PTO 1449

INFORMATION DISCLOSURE STATEMENT

Title: SENESCENT CELL-DERIVED INHIBITORS OF DNA SYNTHESIS

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Applicant: James R. Smith et al.

Filing Date:

Group

December 7, 2001 1647

	OTHERS, including Author, Title, Date, Pertinent Pages, etc. Egbaria, K., et al., "Topical Delivery of Liposomally Encapsulated Interferon Evaluated by In Vitro Diffusion Studies," Antimicrob. Agents Chemother. 34:107-110 (1990)	
	Cevc, G. et al., "Lipid Vescicles Penetrate into Intact Skin Owing to the Transdermal Osmotic Gradients and Hydration Force, "Biochim Biophys. Acta 1104:226-232 (1992)	
	Blume, G., et al., "Molecular Mechanism of the Lipid Vescicle Longevity in vivo," <u>Biochim</u> <u>Biophys. Acta</u> 1146:157-168 (1993)	
	Blume, G., <u>et al.</u> , "Specific Targeting with Poly (theylene glycol)-Modified Liposomes: Coupling of Homing Devices to the Ends of the Polymeric Chains Combines Effective Target Binding with Long Circulation Times," <u>Biochim Biophys. Acta</u> <u>1149</u> :180-184 (1993)	
Examiner:	Date Considered	